

J. BRUGA

1631

12/7/00

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/202,838

DATE: 11/28/2000  
TIME: 14:54:41

Input Set : A:\Myc00111.app  
Output Set : N:\CRF3\11282000\I202838.raw

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3 <110> APPLICANT: Verdaguier, Bertrand
4 de Kochko, Alexandre
5 Beachy, Roger N.
6 Fauquet, Claude
8 <120> TITLE OF INVENTION: CASSAVA VEIN MOSAIC VIRUS PROMOTERS AND USES THEREOF
10 <130> FILE REFERENCE: MYC0011S
12 <140> CURRENT APPLICATION NUMBER: 09/202,838
13 <141> CURRENT FILING DATE: 2000-01-21
15 <150> PRIOR APPLICATION NUMBER: PCT/US97/10376
16 <151> PRIOR FILING DATE: 1997-06-20
18 <150> PRIOR APPLICATION NUMBER: 60/020,129
19 <151> PRIOR FILING DATE: 1996-06-20
21 <160> NUMBER OF SEQ ID NOS: 36
23 <170> SOFTWARE: PatentIn Ver. 2.1
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26 <211> LENGTH: 392
27 <212> TYPE: DNA
28 <213> ORGANISM: Cassava vein mosaic virus
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32 atgtacagat acaagatcct atactgccag aatacgaaga agaatacgtg gaaattqaaa 120
33 aagaagaacc aggcgaagaa aagaatcttg aagacgtaag cactgacgac acaaatgaaa 180
34 agaagaagat aaggtcgggtg attgtgaaag agacatagag gacacatgta aggtggaaaa 240
35 tgttaaggcg gaaagtaacc ttatcacaaa ggaatcttat cccccactac ttatcctttt 300
36 atatttttcc qtgtcatttt tgcccttqag ttttcctata taaggaaaca agttcggcat 360
37 ttgtgaaaaa aagaaaaaat ttggtgtaag ct 392
40 <210> SEQ ID NO: 2
41 <211> LENGTH: 524
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43 <213> ORGANISM: Cassava vein mosaic virus
45 <400> SEQUENCE: 2
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47 tatggaagta ttatgtgagc tcagcaagaa gcagatcaat atgcggcaca tatgcaacct 120
48 atgttcaaaa atgaagaatg tacagataca agatcctata ctgccagaal acgaagaaga 180
49 atacgtagaa attgaaaaag aagaaccagg cgaagaaaag aatcttgaaq acgtaagcac 240
50 tgacgacac aatgaaaaaga agaagataag gtcgggtgatt gtgaaagaga catagaggac 300
51 acatgttaagg tggaataatgt aaggcggaag agtaacctta tcacaagga atcttatccc 360
52 ccaactctta tctttttata tttttccgtg tcatttttgc ccttgagttt tcttatataa 420
53 ggaaccaagt tcgqcatctg tgaaaaaaca aaaaaatttg gtgtaagcta ttttctttga 480
54 aglaactgag atacaagttc agagaatttt gtaagtltga attc 524
57 <210> SEQ ID NO: 3
58 <211> LENGTH: 524
59 <212> TYPE: DNA
60 <213> ORGANISM: Cassava vein mosaic virus
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64 tatggaagta ttatgtgagc tcagcaagaa gcagatcaat atgcggcaca tatgcaacct 120
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65 atgttcaaaa atgaagaatg tacagataca agatcctata ctgccagaa acgaagaaga 180
66 atacgtagaa attgaaaaag aagaaccagg cgaagaaaag aatcttgaag acgtaagcac 240
67 tqacqacaac aatgaaaaag aqaagataag gtcggtgatt gtgaaagaga catagaggac 300
68 acatgtaagg tggaaaaatg aagggcggaa agtaacctta tcacaaagga atcttatccc 360
69 ccactactta tctctttata tttttccgtg tcatttttgc ccttgagttt tcttatataa 420
70 ggaaccaagt tcggcatttg tgaacaacaag aaaaaatttg gtgtaagcta ttttctttga 480
71 agtactgagg atacaagttc agagaatttt gtaagtttga attc 524
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75 <211> LENGTH: 411
76 <212> TYPE: DNA
77 <213> ORGANISM: Cassava vein mosaic virus
79 <400> SEQUENCE: 4
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81 aagaagaata cgtgaaatgt gaaaaagaag aaccaggcga agaaaaaat cttgaagacg 120
82 taagcactga cgacaacatg gaaaaagaag agataaggtc ggtgattgtg aaagagacat 180
83 aagagacaca tgtaagggtg aaaatgttaag ggcggaaagt aaccttatca caaaggaatc 240
84 ttatccccc ctacttatcc ttttatatt ttccgtgtca tttttgccct tgagttttcc 300
85 tatataagga accaagttcg gcattttgtg aaacaagaaa aaatttggtg taagctatct 360
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90 <211> LENGTH: 305
91 <212> TYPE: DNA
92 <213> ORGANISM: Cassava vein mosaic virus
94 <400> SEQUENCE: 5
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96 tgtgaaagag acatagagga cacatgtaag gtggaaaatg taagggcgga aagtaacctt 120
97 atcacaaaag aatcttatcc ccactactt atccttttat atttttccgt gtcatttttg 180
98 cccttgagtt ttcttatata aggaaccaag ttcggcattt gtgaaaacaa gaaaaaattt 240
99 ggtgtaagct attttctttg aagtactgag gatacaagtt cagagaaatt tgtaagtttg 300
100 aattc 305
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104 <211> LENGTH: 261
105 <212> TYPE: DNA
106 <213> ORGANISM: Cassava vein mosaic virus
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109 ggatccggtc ggtgattgtg aaagagacat agaggacaca tgtaagggtg aaaatgtaag 60
110 ggcggaaaag aaccttatca caaaggaatc ttatccccc ctacttatcc ttttatattt 120
111 ttccgtgtca tttttgccct tgagttttcc tatataagga accaagttcg gcattttgta 180
112 aaacaagaaa aaatttggtg taagctatct tctttgaagt actgaggata caagttcaga 240
113 gaaatttgta agtttgaatt c 261
116 <210> SEQ ID NO: 7
117 <211> LENGTH: 193
118 <212> TYPE: DNA
119 <213> ORGANISM: Cassava vein mosaic virus
121 <400> SEQUENCE: 7
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123 catttttgcc ctgagtttt cctatataag gaaccaagtt cggcatttgt gaaaacaaga 120
124 aaaaatttgg tgtaagctat tttctttgaa gtactgagga tacaagttca gagaattttg 180
125 taagtttgaa ttc 193

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128 <210> SEQ ID NO: 8
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130 <212> TYPE: DNA
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135 gaaaaacaaga aaaaattttgq tgytaagctat ttcttttgaa gtactgagga tacaagtcca 120
136 gagaattttg taagtttgaa ttc                                     143
139 <210> SEQ ID NO: 9
140 <211> LENGTH: 420
141 <212> TYPE: DNA
142 <213> ORGANISM: Cassava vein mosaic virus
144 <400> SEQUENCE: 9
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146 actatggaag tattatgtga gctcagcaag aagcagatca atatgcggca catatggatc 120
147 ctgaagacgt aagcactgac gacaaccaatg aaaaagaaga gataaggtcg gtgatttgtg 180
148 aagagacata gaggacacat gtaaggtgga aaatgtaagg gcggaaagta accttatcac 240
149 aaaggaatct tatcccccac tacttatact tttatatatt tccgtgtcat ttttgccctt 300
150 gagtttttct atataaggaa ccaagttcgg catttggtgaa aacaagaaaa aatttggtgt 360
151 aagctatttt ctttgaagta ctgaggatac aagttcagag aaattttgta gtttgaattc 420
154 <210> SEQ ID NO: 10
155 <211> LENGTH: 482
156 <212> TYPE: DNA
157 <213> ORGANISM: Cassava vein mosaic virus
159 <400> SEQUENCE: 10
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161 actatggaag tattatgtga gctcagcaag aagcagatca atatgcggca catatgcaac 120
162 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
163 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa aggatccggt cggtgattgt 240
164 gaaagagaca tagaggacac atgtaagggtg gaaaatgtaa gggcggaagg taaccttata 300
165 acaaaaggaat cttatccccc actacttata cttttatatt tttccgtgtc atttttgccc 360
166 ttgagtttct ctatataagg aaccaagttc qgcatttgtg aaaacaagaa aaaaatttgt 420
167 gtaagctatt ttctttgaag tactgaggat acaagttcag agaaatttgt aagtttgaat 480
168 tc                                     482
171 <210> SEQ ID NO: 11
172 <211> LENGTH: 458
173 <212> TYPE: DNA
174 <213> ORGANISM: Cassava vein mosaic virus
176 <400> SEQUENCE: 11
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178 actatggaag tattatgtga gctcagcaag aagcagatca atatgcggca catatgcaac 120
179 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
180 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattctga agacgtaaac 240
181 actgacgaca acaatgaaaa gaagaggatc cttatcacaa aggaattcta tccccacta 300
182 cttatccctt tatatitttc cgtgtcattt ttgcccttga gttttcctat ataaggaacc 360
183 aagttcggca ttgtgaaaa caagaaaaaa ttggtgtaa gctattttct ttgaagtact 420
184 gaggatacaa gttcagagaa atttgaagt ttgaattc                                     458
187 <210> SEQ ID NO: 12
188 <211> LENGTH: 468

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189 <212> TYPE: DNA
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194 actatggaag tattatgtga gctcagcaag aagcagatca atatgaggca catatgcaac 120
195 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
196 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattcttga agacgtaagc 240
197 actgacgaca acaatgaaaa gaagaagata aggtcggatc cttatcacaa aggaattctta 300
198 tccccacta cttatccttt tatatttttc cgtgtcattt ttgcccttga gttttcctat 360
199 ataaggaacc aagttcggca tttgtgaaaa caagaaaaaa tttggtgtaa gctattttct 420
200 ttgaagtact gaggatataa gttcagagaa atttgtaagt ttgaattc 468
203 <210> SEQ ID NO: 13
204 <211> LENGTH: 491
205 <212> TYPE: DNA
206 <213> ORGANISM: Cassava vein mosaic virus
208 <400> SEQUENCE: 13
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210 actatggaag tattatgtga gctcagcaag aagcagatca atatgaggca catatgcaac 120
211 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
212 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattcttga agacgtaagc 240
213 actgacgaca acaatgaaaa gaagaagata aggtcgggtg ttgtgaaaga gacataaggg 300
214 atccttatca caaaggaaac ttatccccca ctacttatcc ttttatattt ttccgtgtca 360
215 tttttgcct tgagttttcc tatataagga accaagttcg gcattttgtg aaacaagaaa 420
216 aaatttggtg taagctattt tctttgaagt actgaggata caagttcaga gaaatttgta 480
217 agtttgaatt c 491
220 <210> SEQ ID NO: 14
221 <211> LENGTH: 408
222 <212> TYPE: DNA
223 <213> ORGANISM: Cassava vein mosaic virus
225 <400> SEQUENCE: 14
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227 actatggaag tattatgtga gctcagcaag aagcagatca atatgaggca catatgcaac 120
228 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
229 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattcttga agacgtaagc 240
230 actgacgaca acaatgaaaa gaagaggatc cgtgtcattt ttgcccttga gttttcctat 300
231 ataaggaacc aagttcggca tttgtgaaaa caagaaaaaa tttggtgtaa gctattttct 360
232 ttgaagtact gaggatataa gttcagagaa atttgtaagt ttgaattc 408
235 <210> SEQ ID NO: 15
236 <211> LENGTH: 418
237 <212> TYPE: DNA
238 <213> ORGANISM: Cassava vein mosaic virus
240 <400> SEQUENCE: 15
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242 actatggaag tattatgtga gctcagcaag aagcagatca atatgaggca catatgcaac 120
243 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
244 gaatacgtag aaattgaaaa agaagaacca ggcgaagaaa agaattcttga agacgtaagc 240
245 actgacgaca acaatgaaaa gaagaagata aggtcggatc cgtgtcattt ttgcccttga 300
246 gttttcctat ataaggaacc aagttcggca tttgtgaaaa caagaaaaaa tttggtgtaa 360
247 gctattttct ttgaagtact gaggatataa gttcagagaa atttgtaagt ttgaattc 418

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250 <210> SEQ ID NO: 16
251 <211> LENGTH: 441
252 <212> TYPE: DNA
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257 actatqgaag tattatgtga gctcagcaag aagcagatca atatgcggca catatgcaac 120
258 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
259 gaatacgtag aaattgaaaa agaagaacca ggcgaagaa agaattctga agacgtaagc 240
260 actgacgaca acaatgaaaa gaagaagata aggtcgggtga ttgtgaaaga gacatagagg 300
261 atcogtga tttttgccc tgaattttcc tatataagga accaagttcg qcatattgla 360
262 aaacaagaaa aaatttggtg taagctatct tctttgaagt actgaggata caagttcaga 420
263 gaaatttgta agtttgaatt c                                     441
266 <210> SEQ ID NO: 17
267 <211> LENGTH: 476
268 <212> TYPE: DNA
269 <213> ORGANISM: Cassava vein mosaic virus
271 <400> SEQUENCE: 17
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273 actatqgaag tattatgtga gctcagcaag aagcagatca atatgcggca catatgcaac 120
274 ctatgttcaa aaatgaagaa tgtacagata caagatccta tactgccaga atacgaagaa 180
275 gaatacgtag aaattgaaaa agaagaacca ggcgaagaa agaattctga agacgtaagc 240
276 actgacgaca acaatgaaaa gaagaagata aggtcgggtga ttgtgaaaga gacatagagg 300
277 acacatgtaa ggttgaaaaa glaaggycgg aaaggatccg tgtcattttt gcccttgagt 360
278 tttctatat aaggaaacca gttcggcatt tgtgaaaaca agaaaaaatt tgggtgaagc 420
279 tattttcttt gaagtactga ggatacaagt tcagagaaat ttgtaagttt gaattc   476
282 <210> SEQ ID NO: 18
283 <211> LENGTH: 31
284 <212> TYPE: DNA
285 <213> ORGANISM: Artificial Sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
290 <400> SEQUENCE: 18
291 accggtacca gaaggtaatt atccaagatg t                                     31
294 <210> SEQ ID NO: 19
295 <211> LENGTH: 30
296 <212> TYPE: DNA
297 <213> ORGANISM: Artificial Sequence
299 <220> FEATURE:
300 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
302 <400> SEQUENCE: 19
303 cggaaattcaa acttacaatt ttctctgaag                                     30
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307 <211> LENGTH: 34
308 <212> TYPE: DNA
309 <213> ORGANISM: Artificial Sequence
311 <220> FEATURE:
312 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
314 <400> SEQUENCE: 20

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VERIFICATION SUMMARY  
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